IV. TRANSPORTATION, THE U.S. ECONOMY, AND THE METROPOLITAN PRIORITY

The federal transportation debate is frequently framed as an agent for economic growth. Much of this is intuitive. Transportation links people to jobs, facilitates the production of goods, and brings those goods to consumers. Only 27 percent of all personal trips are social or recreational in nature. Everything else is in some ways related to economic productivity, such as commuting and work related trips (17 percent of all trips), shopping and running errands (45 percent), and trips to school (10 percent).[1]

However, a good rule of thumb for policy makers to keep in mind is Joseph Giglio's admonition that "transportation systems (including roadways) exist to support the economy not vice versa."[2] That truism is often forgotten.

Simultaneously, we see that when ignored, transportation can also have broad negative impacts on the nation. For example, in some metropolitan areas like New York and Los Angeles congestion has become a drag on the national economy, especially in the dense urban core and in and around the ports. Personal spending on transportation is second highest household expense, and in some metropolitan areas like Houston and St. Louis consumers spend more on transportation than on shelter.[3] Greenhouse gas emissions, of which transportation is a major contributor, have significant costs to the economy in the U.S. and abroad.[4] In short, the economic impacts of transportation must be considered broadly.

One major deficiency in the research is that although there are many studies—and much rhetoric—showing that though transportation and the economy are related, the

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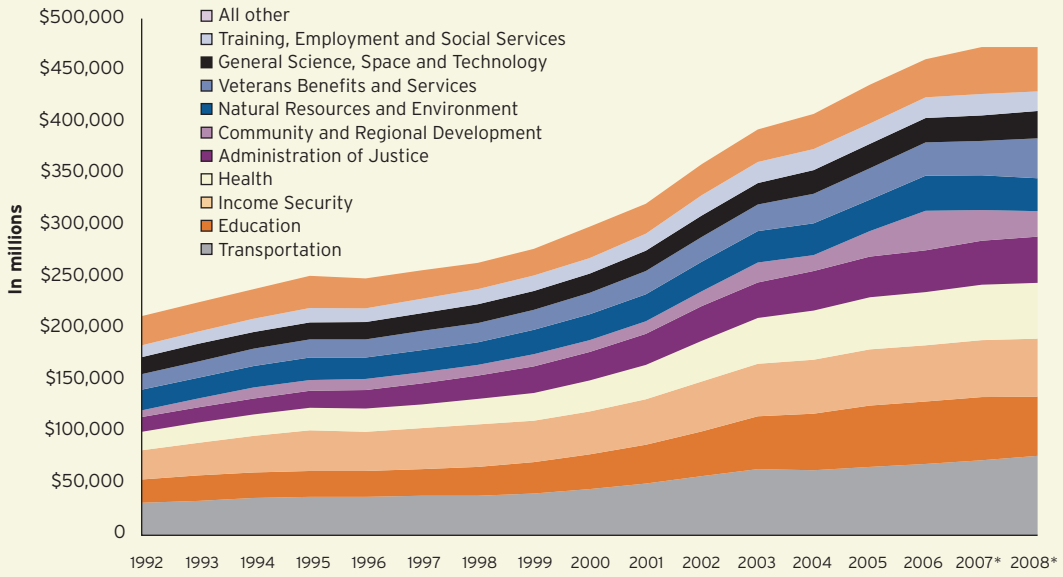

*The * denotes estimated spending in 2007 and 2008.*
Source: Brookings analysis of Historical Tables, Budget of The United States Government (FY 2008), Table 8.7

causality is still generally unknown. For example, does a country begin to invest in transportation to boost its economy, or does a country first have to do well before it invests in its transportation infrastructure? In some respects it seems like it would have to be the latter because some transportation infrastructure is tremendously expensive.[5]

One study goes so far as to say that because of the difficulty in considering externalities and causality there simply is no estimate of the effect of transportation investment on GDP.[6] A review by the National Academy of Sciences of recent models for assessing the relationship between transportation and the economy found that there is a suggestion of a relationship but, they caution, the nature of this is tenuous.[7] Another found that transportation is highly susceptible to recessions and economic slow downs and slowdowns in the transportation sector tend to last longer than those in the overall economy.[8] This suggests that transportation reacts to the trends in the national economy, and not the other way around.

Nevertheless, there is no doubt that the transportation sector is quite large. A 2002 Eno Foundation study found that in 2001, total spending on transportation exceeded $1.5 trillion. Government expenditures make up only about 10 percent of this total and only about one-third of that is federal.[9] Yet, transportation made up the largest share of federal domestic discretionary spending in 2006. It held the top rank every year since 1992 (except for four years in the mid-1990s when it was a close second to income security).

The vast majority of expenses for transportation are from private vehicles (households and businesses) while roads are provided as a substantial public good. In fact, our road network—valued at over $1 trillion—is the nation's largest civilian investment.[10] Transportation itself is also a heavy consumer of products in other industries. About three-quarters of the rubber and lead used in the U.S. is used by transportation, as is 40 percent of plastic, and over one-quarter of the cement and steel.[11]

Looking back at the discussion that launched the interstates shows that the motivation in that era was largely economic.[12] Both President Eisenhower and the congressional committee set up to plan the interstates touted the economic impacts for the nation as a whole.[13]

To a large degree that investment has paid off and transportation investments historically have fostered large productivity gains. A major review of "a century of data" for the FHWA recently found positive relationships between public infrastructure investments and economic productivity—especially in the freight and industrial sector. The benefits and savings for trucking alone justify one-third to one-half of the federal highway investments between 1950 and 1973.[14] These investments largely took the form of the interstate system.

But the literature also shows that this exceptional productivity has not continued in recent decades as investments have lost focus and direction and failed to invest in key areas. A 2004 study found that the transportation investments the U.S. made in the 1970s generated an 18 percent return followed by a 5 percent return for 1980s investments, and only a 1 percent return for the 1990s. The authors speculate that this is due, in part, to the ineffectiveness of national transportation policy that results in poor project selection and pricing inefficiencies.[15] Other reports show similarly alarming declines over time.[16] The example of the interstates is illustrative here as 70 percent of the 42,500 miles proposed were in service by the end of 1970. By 1980 only 1,575 miles were left to be built. So it should come as little surprise that the return on investment in the years since then have been relatively lacking.

The sum and substance of this argument is that the first highways in an area provide massive benefits because they represent prioritized investments. They are theoretically the most important metropolitan investments necessary. The first road between A and B has a huge economic payback. The second (and third) roads have successively smaller effects. Other evidence shows that investments in metropolitan highways do have positive economic impacts on land prices, population, and employment changes near the project. However, those changes generally come at the expense of losses elsewhere in the metropolitan area.[17] It is largely a zero-sum game within metropolitan areas as economic activity is redirected from one area to the next, resulting in zero net national benefit.[18]

The conversation about transportation's impact on the national economy must go beyond the current narrow debate about spending levels.

Returning to an earlier vision of transportation's role and impact will require a sea change in thinking about where transportation dollars go and how they are invested.

For one, we need to rethink transportation spending as a short term stimulus for job growth.

Since the time when the interstates were finished transportation has become less about the national economy and more about job growth. President George H. W. Bush was widely quoted in 1991 when he said the federal transportation law he signed "could be summed up in three words: jobs, jobs, jobs."[19] In recent years the motivation for this job growth has been restricted to the relatively small confines of individual congressional districts. But as the Heritage Foundation points out in this context, "creating jobs is not the same thing as creating value."[20] Transportation spending is a very blunt instrument for job creation.

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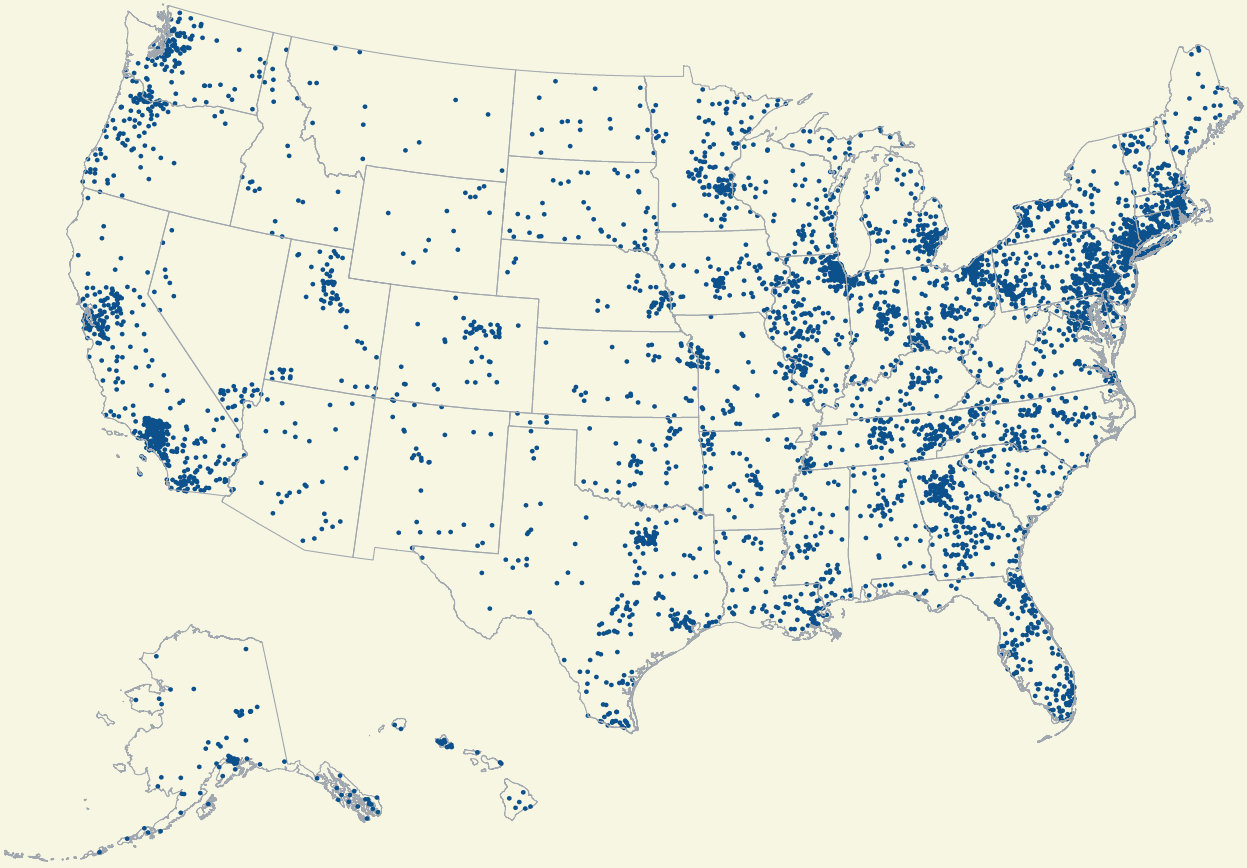

Note: One dot equals one earmark project
Source: Brookings analysis of SAFETEA-LU, Public Law 109-59, various sections.

Yet even if the singular focus of the federal transportation program was to "create" jobs in the short term, there is doubt that even those investments are being done in an optimal way. During the 2003 federal transportation reauthorization debate, policy makers and others widely cited a FHWA economic model known as JOBMOD showing that every $1 billion in federal transportation investments resulted in the creation of 47,000 new American jobs. However, at least one analysis of this model shows that jobs vary considerably by investment type. The model shows that if the goal is to create jobs, then shifting spending to maintenance and repair, and public transportation would result in more employment.[21]

The federal transportation program must not be treated as a giveaway for special pork projects. There is little economic justification for a nation making broad transportation and infrastructure improvements in all places. Yet, that is exactly how the American transportation structure operates as we do not prioritize projects on the national level. SAFETEA-LU's entropic 6,373 earmarks and special interest giveaways have replaced and trumped any unified national purpose. The figure above identifies where these projects are located on the national map. Only about half of the total funding from these earmarks goes to the 100 largest metropolitan areas.

Rather than this hodgepodge of pork, the conversation about transportation's impact on the national economy must go beyond the current narrow debate about spending levels. It is not sufficient to simply know the value of an extra dollar invested in transportation. Although from a public policy perspective we need to know **where** (geographically), and on **what** (modally) to invest, it is also of paramount importance that the federal transportation program clearly articulate **why** and for what purpose investments are to be made.[22]